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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,849	07/12/2005	Martin Kruempelmann	P70529US0	6755
136 7590 08/31/2007 JACOBSON HOLMAN PLLC 400 SEVENTH STREET N.W. SUITE 600 WASHINGTON, DC 20004			EXAMINER CULLER, JILL E	
			ART UNIT 2854	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/541,849

Applicant(s)

KRUEMPELMANN ET AL.

Examiner

Jill E. Culler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7 and 10-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,10-14,16,17 and 19 is/are rejected.
- 7) ☒ Claim(s) 15,18,20 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 6, 10, 11, 14, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,634,297 to Poetter et al. in view of U.S. Patent No. 5,992,318 to DiBello et al.

With respect to claims 1 and 3, Poetter et al. teaches a process for adjusting the print image of a rotation printing machine, comprising ink transfer rollers, 7, 8, and actuators, M1-M4, assigned to them, with which it is possible to change the position of the rollers and in which at least one sensor, K, measures and records a value of an intensity of light experiencing an interaction with the printed material and that the recorded measured values are fed to a control and regulation unit, 13, that compares the recorded measured values with set values and that generates corrective signals for the actuator of at least one part of the rollers involved in the printing process based on which the actuator changes a relative position of the roller assigned to it until the measured values once again lie within a tolerance range characterized in that during the printing process at least one sensor records measurements of the intensity of light experiencing an interaction with the printed material, during the printing operation the measured values are assigned to the ink transferred in at least one inking unit, during

the printing operation the control and regulation unit generates corrective signals for the actuator of at least one part of the rollers, 7, 8, of the respective inking unit involved in the printing process, so that the variations in the ink quantity transferred onto a unit of area of the print image remain within a set range. See column 1, line 47 - column 2, line 22 and column 4, lines 23-35 and 55-62.

Poetter et al. does not teach that for a variation in the printing speed, the control and regulation unit generates additional corrective signals based on which the actuators adjust the roller positions in relation to the printing speed and based on calibration tables or algorithms that are stored in a storage device.

DiBello et al. teaches a printer having a control and regulation unit which generates additional corrective signals for a variation in speed based on which adjustments are made in relation to the printing speed based on calibration tables or algorithms that are stored in a storage device. See column 11, line 60 - column 12, line 44 and column 25, lines 24-46.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Poetter et al. to have the adjustments based on printing speed, as taught by DiBello et al., in order to maintain a proper adjustment as the printing speed changes.

With respect to claim 6, Poetter et al. teaches a rotation printing machine comprising: ink transfer rollers, 7, 8, and actuators, M1-M4, assigned to them, wherein at least one of the actuators can change a relative position of the roller assigned to it based on corrective signals, at least one sensor, K, that measures and records a value

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of an intensity of light experiencing an interaction with a printed material, a control and regulating unit, 13, that compares the recorded measured values with set values and that generates the corrective signals for the actuator of at least one part of the rollers, 7, 8, characterized in that the control and regulating unit assigns the values measured during the printing operation to an amount of ink transferred in the inking unit. See column 1, line 47 - column 2, line 22 and column 4, lines 23-35 and 55-62.

Poetter et al. does not teach that for a variation in printing speed, the control and regulating unit generates additional corrective signals based on which the actuators adjust the roller positions in relation to the printing speed.

DiBello et al. teaches a printer having a control and regulation unit which generates additional corrective signals for a variation in speed based on which adjustments are made in relation to the printing speed based on calibration tables or algorithms that are stored in a storage device. See column 11, line 60 - column 12, line 44 and column 25, lines 24-46.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Poetter et al. to have the adjustments based on printing speed, as taught by DiBello et al., in order to maintain a proper adjustment as the printing speed changes.

With respect to claim 10, Poetter et al. teaches the sensor, K, is a camera. See column 4, lines 55-58.

With respect to claims 11 and 14, Poetter et al. teaches a process for adjusting a quantity of ink transferred in a printing operation comprising illuminating a printed

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material during the printing operation with a light of a predetermined intensity; measuring the intensity of the light that interacts with the printed material; evaluating the measured intensity with a control and regulation unit that compares the measured intensity with a set intensity and that associates the measured intensity with a quantity of ink transferred from a respective inking unit; generating a first corrective signal for an actuator associated with each of a first and a second ink transfer roller of the inking unit, the actuators adjusting a relative position of the ink transfer rollers so that the measured intensity lies within a set intensity range. See column 1, line 47 - column 2, line 22 and column 4, lines 23-35 and 55-62.

Poetter et al. does not teach detecting a speed of the printing operation by determining a rotational speed of a plate roller, such that for a variation in the printing speed, the control and regulation unit generates a second corrective signal based on which the actuators further adjust the relative position of the ink transfer rollers in relation to the detected printing speed so that a quantity of ink transferred onto the printed material remains within a set ink quantity range.

DiBello et al. teaches a printer having a control and regulation unit which detects the speed of the printing operation and generates additional corrective signals for a variation in speed, based on which adjustments are made in relation to the printing speed based on calibration tables or algorithms that are stored in a storage device. See column 11, line 60 - column 12, line 44 and column 25, lines 24-46.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Poetter et al. to have the adjustments based on

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printing speed, as taught by DiBello et al., in order to maintain a proper adjustment as the printing speed changes.

With respect to claim 16, Poetter teaches a process for adjusting a quantity of ink transferred in a printing operation comprising illuminating a printed material during the printing operation with a light of a predetermined intensity; measuring the intensity of the light that illuminates the printed material; evaluating the measured intensity by comparing the measured intensity with a set intensity and associating the measured intensity with a quantity of ink transferred from a respective inking unit; providing a first corrective signal to an actuator associated with each of a plate roller and an inking roller of the inking unit, the actuators adjusting a relative position of the plate roller and the inking roller so that the measured intensity lies within a set intensity range. See column 1, line 47 - column 2, line 22 and column 4, lines 23-35 and 55-62.

Poetter et al. does not teach detecting a speed of the printing operation by determining a rotational speed of the plate roller; and providing a second corrective signal to the actuators based on the detected printing speed such that the actuators further adjust the relative position of the plate roller and the inking roller so that the ink quantity transferred onto the printed material is within a set ink quantity range.

DiBello et al. teaches a printer having a control and regulation unit which detects the speed of the printing operation and generates additional corrective signals for a variation in speed, based on which adjustments are made in relation to the printing speed based on calibration tables or algorithms that are stored in a storage device. See column 11, line 60 - column 12, line 44 and column 25, lines 24-46.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Poetter et al. to have the adjustments based on printing speed, as taught by DiBello et al., in order to maintain a proper adjustment as the printing speed changes.

With respect to claim 17, Poetter et al. teaches the step of adjusting the relative position of the plate roller and the inking roller includes moving the plate roller, 7, and the inking roller relative to a position of an impression roller, 3, that is in operative communication with the plate roller. See column 4, lines 23-35.

3. Claims 4, 5, 7, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Poetter et al. in view of DiBello et al., as applied to claims 1, 3, 11, 16 and 17 above, and further in view of U.S. Patent No. 6,497,179 to Allen et al.

With respect to claims 4-5, Poetter et al. and DiBello et al. teach all that is claimed, as in the above rejection of claims 1, 3, 6, 10, 11, 14, 16 and 17, except that the sensor records the intensity of light that has penetrated the printed material characterized in that at least one light source supplies the light to a side of the printed material that is opposite to the sensor.

Allen et al. teaches a printing apparatus having a sensor, 48, which records the intensity of light, 45a, that has penetrated the printed material, 12, characterized in that at least one light source, 42a, supplies the light to a side of the printed material that is opposite to the sensor. See column 4, lines 4-17 and Fig. 2B.

It would have been obvious to one having ordinary skill in the art at the time of the invention to further modify the process of Poetter et al. to have the penetrating light source of Allen et al. in order to be able to better detect the characteristics of the material.

With respect to claim 7, Poetter et al. and DiBello et al. teach all that is claimed, as in the above rejection of claims 1, 3, 6, 10, 11, 14, 16 and 17, except that the sensor measures the light intensity in various spectral ranges.

Allen et al. teaches a sensing system, 26, which can measure the light intensity of light sources in various spectral ranges. See column 3, lines 54-60.

It would have been obvious to one having ordinary skill in the art at the time of the invention to further modify the process of Poetter et al. to have the varying light sources taught by Allen et al. in order to be able to interpret different aspects of the medium.

With respect to claims 12-13, Poetter et al. and DiBello et al. teach all that is claimed, as in the above rejection of claims 1, 3, 6, 10, 11, 14, 16 and 17, except that the step of measuring the light intensity includes measuring the light that penetrates the printed material and detecting the light with a sensor on a side of the printed material that is opposite a source of the light.

Allen et al. teaches a printing process which includes having a sensor, 48, which records the intensity of light, 45a, that has penetrated the printed material, 12, and detecting the light with a sensor on a side of the printed material that is opposite a source, 42a, of the light. See column 4, lines 4-17 and Fig. 2B.

It would have been obvious to one having ordinary skill in the art at the time of the invention to further modify the process of Poetter et al. to have the penetrating light source of Allen et al. in order to be able to better detect the characteristics of the material.

4. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Poetter et al. in view of DiBello et al. and Allen et al.

With respect to claim 19, Poetter et al. teaches a printing machine comprising: a light source having a predetermined light intensity that illuminates a printed material during a printing operation; and a control and regulating unit that evaluates the measured light intensity by comparing the measured intensity with a set intensity, associates the measured intensity with a quantity of ink delivered from an inking unit, and provides a first corrective signal to actuators that adjust a relative position of the plate roller and the inking roller so that the measured light intensity lies within a set intensity range. See column 1, line 47 - column 2, line 22 and column 4, lines 23-35 and 55-62.

Poetter et al. does not teach a sensor located on a side of the printed material opposite the light source that measures the intensity of the light received through the printed material. Poetter et al. also does not teach a detector that determines a speed of the printing operation by detecting a rotational speed of a plate roller that operatively communicates with an inking roller and with an impression roller, or that the control and regulating unit evaluates the detected printing speed and provides a second corrective

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signal based thereon to the actuators, which further adjust the relative position of the plate roller and the inking roller such that the ink quantity transferred onto the printed material is within a set ink quantity range.

Allen et al. teaches a printing apparatus having a sensor, 48, opposite a light source, 42a, which measures the intensity of light, 45a, that has penetrated the printed material, 12. See column 4, lines 4-17 and Fig. 2B.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Poetter et al. to have the penetrating light source of Allen et al. in order to be able to better detect the characteristics of the material.

DiBello et al. teaches a printer having a control and regulation unit which detects the speed of the printing operation and evaluates the detected printing speed and provides additional corrective signals for a variation in speed to the actuators, which further adjust the relative position of the plate roller and the inking roller such that the ink quantity transferred onto the printed material is within a set ink quantity range. See column 11, line 60 - column 12, line 44 and column 25, lines 24-46.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Poetter et al. to have the adjustments based on printing speed, as taught by DiBello et al., in order to maintain a proper adjustment as the printing speed changes.

Allowable Subject Matter

5. Claims 15, 18 and 20-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

With respect to claims 15 and 20, the prior art does not teach or render obvious a process or machine as claimed particularly including that the detector determines the speed of the printing operation by determining an effective radius of the rotating plate roller.

With respect to claim 18, the prior art does not teach or render obvious a process as claimed particularly including that the steps of detecting the speed of the printing operation and providing the second corrective signal to the actuators are preformed before the steps of evaluating the measured intensity and providing the first corrective signal to the actuators.

With respect to claim 21, the prior art does not teach or render obvious a machine as claimed particularly including that the control and regulating unit determines the second corrective signal based on stored calibrations that associate a plate roller speed with a plate roller position.

Response to Arguments

6. Applicant's arguments filed March 30, 2007 have been fully considered but they are not persuasive.

In response to applicant's arguments that neither Poetter nor DiBello teaches adjustment of the roller positions based on the speed of the printing operation, the combination of the references is used to teach this element of the claims. Poetter teaches the adjustment of the roller positions. DiBello teaches the electronic adjustment of the image detection system in relation to the printing speed. One having ordinary skill in the art would recognize that the principle of adjustment based on printing speed, as taught by DiBello, could be applied to the roller adjustment process of Poetter during a printing operation in order to adjust the amount of ink as the speed is changed.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, one having ordinary skill in the art would recognize the above-discussed advantages of a control and regulating unit which generates corrective signals based on the speed of a printing operation, as taught by DiBello, and would be motivated to apply them to the roller adjustment process of Poetter in order to recognize these advantages.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill E. Culler whose telephone number is (571) 272-2159. The examiner can normally be reached on M-F 10:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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jec

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